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## ABSTRACT

Designed to present a broad picture that characterizes the current world situation with respect to preservation and conservation of library and archival documents, this report is based on a March 1986 survey on the state of the world's patrimony which was funded by Unesco and undertaken jointly by IFLA (the International Federation of Library Associations) and ICA (the International Council on Archives). Additional information was collected during a series of short visits to 12 countries by a number of experts, and supplemental information was provided by national archival or library institutions in 13 countries. Following a brief introduction and discussion of the study methodology, results of the survey questionnaire are discussed, major concerns are summarized, and the scale and scope of the preservation and conservation problem are analyzed. The framework for an action program to address the areas of awareness, education and training, policy development and implementation measures, and treatment measures is then outlined. Recommendations for Unesco, ICA and IFLA, and national institutions and associations are also presented together with six technical recommendations. The survey questionnaire and a listing of follow-up mission visits to selected countries are appended. (KH)

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# Preservation and conservation of library documents: a Unesco / IFLA / ICA enquiry into the current state of the world's patrimony

General Information Programme and UNISIST

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PRESERVATION AND CONSERVATION OF LIBRARY DOCUMENTS:

A UNESCO/IFLA/ICA ENQUIRY INTO THE CURRENT STATE OF THE WORLD'S PATRIMONY

prepared by D.W.G. Clements

General Information Programme and UNISIST

United Nations Educational,  
Scientific and Cultural Organization

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PRESERVATION AND CONSERVATION OF LIBRARY AND ARCHIVAL  
DOCUMENTS : AN UNESCO/IFLA/ICA ENQUIRY INTO THE  
CURRENT STATE OF THE WORLD'S PATRIMONY

INTRODUCTION

1. At its 23rd session (1985/86 Programme and Budget, paragraph 07208) Unesco adopted a programme to be undertaken jointly with IFLA and ICA for the preparation of an international conference on the preservation and conservation of library and archival documents over the world. As a preliminary step it was agreed that a survey should be undertaken to assess the actual state of the world patrimony. The survey was to be funded by Unesco and undertaken by ICA and IFLA jointly. This report aims to present the broad picture that emerged from this enquiry that characterises the current world situation with respect to preservation and conservation, identifies the priority problems, outlines the basis of an action programme that needs to be undertaken and formulates specific recommendations directed to Unesco, IFLA and ICA and to national institutions and associations.

METHODOLOGY

2. In order to try to assess the current state of preservation and conservation of library and archival documents throughout the world, it was agreed that the best starting point would be to collect as much information as possible by use of a questionnaire. A questionnaire was prepared jointly by representatives from IFLA and ICA during January and February 1986 and issued in early March (copy attached at Annex 1). The majority of the returns were received by August 1986.
3. In order to refine the results coming from the survey as well as to obtain a deeper understanding of the problems and priorities, a series of short visits or missions were undertaken in August to October by a number of experts to twelve selected countries (see Annex 2). These visits served to collect more detailed information on preservation conditions prevailing in each

selected country, the policies that were being followed in the field of preservation and conservation, the type of training and research programmes that existed, an assessment of existing and planned conservation facilities, the extent to which co-operation and exchange programmes existed and an appreciation of expectations with respect to international and interprofessional co-operation.

4. Finally, at the end of July 1986, a further thirteen national archival or library institutions were requested by letter to supply some additional information on various topics such as research and training programmes, co-operation between libraries and archives, conservation of newspapers etc. Replies were received from eight countries (People's Republic of China, Costa Rica, Ethiopia, Indonesia, Malaysia, Mexico, Nigeria and Sierra Leone) and provided some additional information in support of the above mission reports.

#### RESULTS OF THE QUESTIONNAIRE

##### Background

5. Some 850 questionnaires were sent to 300 archives and 550 libraries and 417 replies were received or 49%. A more detailed analysis of the replies is under preparation but a broad picture has been prepared based on the responses of 287 institutions (123 archives and 164 libraries) to thirteen sections of the questionnaire dealing with the control of the environment (2.3), exploitation of the results of checking the environment (2.4), particular problems of buildings (3.1.8.), the occurrence of disinfestation (3.2.3.), changes in preservation conditions over the past few years (3.3.), the effects of use by the public (3.5.), the main causes of deterioration of documents (3.6.), changes in budgetary levels (4.1.), the existence of systematic preservation policies (4.2.), the existence of a conservation workshop (4.3.), and reprographic workshop (4.4.), systematic programmes for tackling newspapers

and periodicals (5.1.) and oversize documents (5.2.)

Table 1 summarises the responses given to the thirteen sections of the questionnaire. The responses were sub-divided into those from East and West Europe and those from all other countries to provide a clear contrast between an advanced region and other regions (a more refined analysis will be provided in due course).

#### Environmental control

6. Library and archival materials consist primarily of organic matter and are therefore inherently perishable and the rate of decay is strongly influenced by environmental factors (temperature, humidity, light and atmospheric pollutants including dust) for which standards exist in many countries. Environmental factors vary from country to country and their importance could be indicated by the fact that some two-thirds of all institutions said that they systematically checked the environment in their buildings i.e. temperature, humidity and/or quality of the air (question 2.3.). It was however evident that in East and West European countries, 76% of institutions carried out such checks but in all other countries, the majority of whom suffer from greater climatic extremes (including dust, high temperatures and relative humidity and frequently air pollution), the proportion of institutions undertaking any checking of the environment was much lower - only 57%.
  
7. Respondents were also asked whether they made use of the results of checking the temperature, humidity, or air pollution levels on a systematic basis in order to avoid the worst effects of such factors (question 2.4.). Only 45% claimed to make any use of this monitoring again with a higher proportion in European countries (56%) and a much lower proportion in other countries (35%).

TABLE 1

## SUMMARY OF PRELIMINARY ANALYSIS OF IFLA/ICA QUESTIONNAIRE

|                         |                  | Systematic checks<br>of environment | Use made of results<br>from monitoring | Buildings having<br>particular problems | Disinfection<br>carried out | Have Preservation<br>conditions<br>altered |              |             | Public use resulting<br>in deterioration | Causes of deteriorat-<br>ion identified | Have finance<br>levels allocated<br>to Preservation<br>altered over<br>past 5/10 years |              |             | Existence of<br>systematic policies | Existence of<br>conservation workshop | Existence of repro-<br>graphic workshop | Systematic programmes<br>for newspapers and<br>periodicals | Systematic programmes<br>for oversize documents |
|-------------------------|------------------|-------------------------------------|----------------------------------------|-----------------------------------------|-----------------------------|--------------------------------------------|--------------|-------------|------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------|--------------|-------------|-------------------------------------|---------------------------------------|-----------------------------------------|------------------------------------------------------------|-------------------------------------------------|
|                         | No of<br>replies | 2.3                                 | 2.4                                    | 3.1.8                                   | 3.2.3                       | 3.3                                        |              |             | 3.5                                      | 3.6                                     | 4.1                                                                                    |              |             | 4.2                                 | 4.3                                   | 4.4                                     | 5.1                                                        | 5.2                                             |
|                         |                  |                                     |                                        |                                         |                             | same                                       | better       | worse       |                                          |                                         | same                                                                                   | better       | worse       |                                     |                                       |                                         |                                                            |                                                 |
| EAST AND WEST<br>EUROPE | 139              | 106<br>76.2%                        | 78<br>56.1%                            | 37<br>26.6%                             | 41<br>29.5%                 | 71<br>51.1%                                | 53<br>38.1%  | 11<br>7.9%  | 126<br>90.6%                             | 125<br>89.9%                            | 46<br>33.1%                                                                            | 64<br>46.0%  | 25<br>18.0% | 124<br>89.2%                        | 95<br>68.3%                           | 98<br>70.5%                             | 89<br>64.0%                                                | 80<br>57.5%                                     |
| ALL OTHER<br>COUNTRIES  | 148              | 84<br>56.7%                         | 52<br>35.1%                            | 61<br>41.2%                             | 100<br>67.6%                | 74<br>50.0%                                | 50<br>33.8%  | 21<br>14.2% | 126<br>85.1%                             | 127<br>85.8%                            | 54<br>36.4%                                                                            | 57<br>38.5%  | 24<br>16.2% | 131<br>85.5%                        | 82<br>55.4%                           | 74<br>50.0%                             | 118<br>79.7%                                               | 89<br>60.1%                                     |
| TOTAL                   | 287              | 190<br>66.2%                        | 130<br>45.3%                           | 98<br>34.1%                             | 141<br>49.1%                | 145<br>50.5%                               | 103<br>35.9% | 32<br>11.1% | 252<br>87.8%                             | 252<br>87.8%                            | 100<br>34.8%                                                                           | 121<br>42.2% | 49<br>17.1% | 255<br>88.8%                        | 177<br>61.7%                          | 172<br>59.9%                            | 207<br>72.1%                                               | 169<br>58.9%                                    |

Building problems

8. Control of environmental conditions are very much tied up with the types of buildings in which libraries and archives are housed, the extent to which the buildings were purpose-built or adapted, the regularity of building maintenance etc. Approximately one-third (34%) of all institutions reported the existence of various specific problems such as condensation, oxidation of metallic parts etc., that demonstrate the presence of unsuitable storage conditions for documents and the need to improve buildings (question 3.1.8.) Such problems were reported in just over 40% of institutions from other parts of the world compared with some 27% of those located in the European region.

Disinfection

9. Biological agents (mould, insects, rodents, etc.) can cause serious and sometimes irreparable damage to library and archival materials (and library fittings) and represent a major problem in many parts of the world. Institutions were therefore asked to indicate the extent to which they disinfect newly received accessions and disinfect their storerooms (question 3.2.3.). Overall almost half (49.1%) of all institutions utilised disinfestation procedures and whereas biological pests were less of a problem in the European region where only 29% need to use disinfestation procedures regularly over all the other parts of the world over two-thirds (67.6%) of institutions regularly used disinfection procedures.

Changes in preservation conditions

10. To attempt to assess trends over the past few years, institutions were asked to state whether preservation conditions in their buildings had improved or deteriorated over the past five to ten years (question 3.3.). On average 50% of the institutions estimated that conditions had remained unchanged while 36% estimated they had improved but 11% that they had deteriorated.

11. There was little difference in the replies from different parts of the world though in the European region slightly more institutions felt matters had improved and slightly fewer that matters had deteriorated. In the light of the knowledge of the size of the preservation problems facing us throughout the world and the fact that in so many cases, there are plenty of simple and low cost measures that could be taken to improve general conditions, the fact that almost two thirds of all institutions had shown no improvement demonstrates the need for increased awareness and improved dissemination of information on preservation problems and how to cope with them. The most disappointing thing was the fact that whereas in the European region some 8% of the institutions had got worse, in other parts of the world 14% estimated matters had got worse.

Effects of use by the public

12. Library materials are, of course, meant to be used, while archival materials are equally consulted but whereas archives are by definition concerned to retain permanently everything they collect, library objectives vary from complete retention as in national copyright collections to short term collections for loan. Usage however gradually wears documents and frequent usage and/or careless handling of material by staff as well as readers is one of the major factors causing deterioration of library and archival collections.
13. To try to assess the effects of use institutions were asked whether they had observed deterioration in library and archival documents that had resulted from use by the public (question 3.5.) and an overwhelming 88% of institutions had observed the effects of use. This was virtually the same problem all over the world. The same level of response was also seen in question (3.6.) where 88% of the institutions identified the four main factors of frequent use, inadequate supervision, photocopying and impossibility of producing microfilm copies, all of which are tied up with public usage and are commonly recognised factors that result in deterioration of library and archival documents.

Preservation and conservation policies and resources

14. To tackle the massive preservation and conservation problems that are found throughout the world requires both properly thought through and systematic policies and levels of resources commensurate with the scale of the problems and the total resources available to libraries and archives.
15. As a first measure, the questionnaire sought to assess changes in funding levels allocated to preservation and conservation (question 4.1.) although in most institutions this is made more difficult by the fact that no separate budgets exist for most preservation activities and further that some activities such as microfilming may not be recognised as contributing to preservation programmes. Overall some 35% of institutions reckoned that financial means allocated to preservation and conservation had remained unchanged. At the same time 42% estimated funding levels had improved as opposed to 17% where funding levels had diminished. There was little difference between the different parts of the world and while the proportion having increased funds is encouraging, the level of increases where they exist are probably on limited facets only, as the earlier question on general preservation conditions had shown that in the majority of places there had been no improvement.
16. The existence of systematic policies to tackle factors of general importance in preservation programmes is essential and should cover such features as improving preservation conditions, developing conservation facilities, repacking and rebinding materials, transfer to other media and training and recruiting qualified staff (see question 4.2.). Some systematic policies were being pursued by most libraries (89%) in one form or another on at least some of their aspects though the effectiveness of such policies needs to be carefully assessed.

#### Preservation resources

17. Though most libraries and archives felt they were pursuing some aspects of a systematic policy for preservation, some 62% had some form of conservation workshop operating in their institution with 68% of the institutions in the European region having a workshop and only 55% in other parts of the world (question 4.3.). The presence of reprographic or microphotographic facilities was found to be at a similar level of occurrence (60%) but with a somewhat higher frequency in the European region (70%) compared with other parts of the world (50%) as shown by question 4.4.

#### Special documents

18. Apart from general library and archival documents attention was also drawn to the problems of special documents. For preserving newspapers and periodicals systematic programmes often exist for microfilming, binding/rebinding and/or reinforcement of paper. Some 72% of institutions had some systematic programmes for dealing with newspapers and periodicals (question 5.1.) and it was interesting that 80% of institutions from other parts of the world had such programmes compared with 64% from the European region. Oversize documents such as maps, posters, etc., are frequently treated by producing black and white or colour microforms, re-shelving/flattening to improve their storage and by re-inforcement. On average 59% of all institutions utilised such practices (question 5.2.).

## MISSION REPORTS

19. As a follow up to the questionnaire a series of visits to twelve countries were undertaken by experts in order to refine the results and to collect more detailed information. In addition some further information was received from eight countries and used to supplement the results of these missions. The following section of the report therefore aims to provide a general review of the information collected by the questionnaire together with that contained in the mission reports so as to provide an overview of the current state of conservation of the world's patrimony.

## MAJOR CONCERNS

20. Properties of documents

Library and archival materials are principally made from organic materials that are inherently perishable. Paper and paper based products such as board form the basis for the vast majority of library and archival documents together with cloth and glues of organic origin. All such material decays more rapidly at higher temperature and humidity levels, in the presence of acids that occur through air pollution, through the presence of dust and as a result of exposure to light which is energy and promotes chemical decomposition. Chemical damage to leathers is mainly the result of improper tanning and/or atmospheric pollution and is to be widely found. Photographic film is especially liable to chemical as well as physical damage and needs to be properly stored and handled although under proper conditions it has a long life. Many other media are also found in library and archive collections (e.g. gramophone records, magnetic tapes, photographs, etc) each of which has special needs and all generally have shorter life expectations than paper.

21. While many of the older, hand made papers, etc., are stable and longer lasting, the same types of materials produced more recently do not last anywhere near as long. The change from rag based hand made paper to wood pulp paper is one of the best known examples where changes in sources of raw materials necessitated by demand combined with changes in production processes has resulted in massive conservation problems in many countries and now represents one of the most widespread factors affecting the scale of the conservation problems throughout the world. In some cases discussions with manufacturers of such materials can help to improve their durability as for example in the production of longer lasting acid free paper but this is inevitably influenced by economic factors and needs to be undertaken on a world wide basis. There are relatively few countries where such an approach is being actively pursued.

#### Buildings

22. Although some library and archive buildings have been purpose built, most consist of buildings that were not constructed for such purposes and in many cases are unsuitable. While it is accepted that in most countries the majority of institutions will have to make do with using existing buildings, much could be done to adapt them to the purpose for which they are intended. Even more important is the necessity for regular building maintenance. In many cases libraries and archives were utilising old buildings not really suitable for their purpose and often overcrowded but in many cases the lack of building maintenance was obvious with leaking roofs, badly fitting windows and doors, broken furniture, cracked pipes, etc. There was a universal need to improve such buildings. The fact that one-third of the libraries and archives surveyed reported the presence of specific problems relating to buildings or accommodation, is probably more an indication of the general lack of awareness of the problems caused by inadequate accommodation and lack of maintenance rather than a measure of the quality of the accommodation available to them.

#### Environmental factors

23. The influence of climatic factors on the process of decay of library and archival materials is well known and the process of decay can be slowed down considerably by creating favourable storage conditions taking into account the general level of air pollution, the possibility of creating a controlled climatic environment and the cleanliness of the storage accommodation.
24. Temperature and humidity conditions during the long term storage of library and archival materials have a significant and lasting impact on their preservation and there is scientific evidence to show that the lower the temperature and relative humidity the longer documents will retain their physical strength and appearance. Growth of biological pests is also increasingly discouraged as temperature and relative humidity levels are reduced. A suitable compromise for conditions in storage areas can generally be found in the temperature range of 16° to 21° C and a relative humidity between 40 and 60%. Large and frequent fluctuations should also be avoided as far as possible. Such conditions are difficult to approach unless some form of air conditioning is available which needs to operate 24 hours a day, seven days a week. It was however evident that relatively few institutions had any real control over temperature let alone relative humidity and had to resort to simpler measures such as use of fans and de-humidifiers. It was also seen that even simple measures to try to reduce the extremes of temperature and humidity were often not applied. Most institutions therefore are only measuring temperature or sometimes relative humidity when checking environmental conditions in the buildings and less than half claim to make any use of the measurements. It is of course generally in those countries that face the worst extremes of high temperatures and high humidity levels where problems of control are the greatest and the equipment to control the environment the least available. They are usually also the least able to meet the high costs incurred in operating such sophisticated control systems.

25. Air pollution is to a large extent associated with towns and industry and is a cause of damage to paper etc., as well as to buildings. Gaseous pollutants such as sulphur dioxide can only be controlled by air filtration as part of full ducted air conditioning and very few places have such facilities.
26. The larger air borne particles are described as dust and are a real and widespread problem found in many countries but one which is too frequently ignored. Much could be done to reduce the problem by regular cleaning programmes and by making sure all doors and windows fit firmly, using sealing strips, using hinged rather than sliding windows, etc.
27. Light at all wavelengths is harmful and light levels must be kept as low as practical in storage, reader and exhibition areas. The effect of light is cumulative and many simple means can be taken such as use of blinds or shades to reduce light levels and heat gain, the use of UV (ultra violet) filters on windows, exhibition cases, etc., to reduce the damaging effects of ultra violet light. Although many institutions in older buildings utilise many of these simple means there were still many institutions where such steps are totally ignored and books could be seen on shelves bleached by the sunlight and documents in exhibition cases that have been left to suffer from excessive light on the same pages for many years.

#### Biological Pests

28. Biological pests include fungi, insects, rodents and other pests and can cause serious and sometimes irreparable damage to library and archival documents. In many regions of the world biological pests represent a major problem but so often have been tackled without any real knowledge of the species of pest involved, without adequate regard for health and safety factors for staff and often without regard for the

potential effects of the pesticides on the documents themselves. Certainly the practice has been to utilise a limited range of chemicals but many of these are now being questioned on health and safety grounds and are not now commonly used. The regular use of many pesticides has other effects such as the development of resistant strains of pests. This is a complex area in which consultation with appropriate specialists who combine both a knowledge of the pests, a knowledge of the potential pesticides as well as a knowledge of the effects of the chemicals on the documents is essential. It is also an area where ignorance is vast and much research work awaits to be done. The widespread nature of the problem was illustrated by the fact that half of the institutions utilise disinfection processes and indeed this rose to two-thirds in the non-European regions of the world and should probably have been higher. Certainly the visits showed the presence of biological pests active in many collections in non-European regions in need of disinfestation.

#### Use, handling and storage

29.

Library and archival materials are there to be consulted though libraries frequently face much heavier levels of use from the general public as well as those with special interests. Very frequent usage poses dangers from repeated handling as does inappropriate use. It should therefore be the duty of the librarian or archivist to ensure documents are used in such a way that they are not damaged and to restrict the use of rare or precious materials to those who really have need for access to the originals. Deterioration of documents as a result of use by the public was found in about 90% of the institutions. Readers need to be guided or if necessary trained to use library and archival documents properly in order to minimise the effects of frequent use and to avoid the effects of improper use. Many institutions have produced rules for readers that incorporate a list of things they should not do and this needs to be combined with adequate supervision by staff, a lack of which however was recorded in

the survey as one of the causes of excessive wear.

30. Apart from the effects of use by the public, just as much care needs to be taken by staff in retrieving and re-shelving documents, and while material is in transit from within or between buildings. Unnecessary damage can be caused by careless handling and evidence could be seen during many of the visits. All staff need to be trained in good practices to ensure documents are properly handled.
31. Storage is in fact an extension of good housekeeping practices with the need for properly designed materials and equipment to house the collections and good practices. Evidence of bad practice and neglect was found on some of the visits with obviously no concern being shown for the proper storage and care of materials, sometimes with documents being piled on the floor, left in unsorted heaps and effectively being unfindable. Such attitudes can only be tackled with proper guidance from the senior staff and by training and following standards and good practices. Greater dissemination of information on good practices would be of help but so much is really a question of common sense, care and acceptance of responsibility. There are particular risks in photography and reprography of library and archival materials and these operations should be properly controlled and supervised. Special care needs to be taken when photocopying material by standard flat-bed photocopying machines in order to protect volumes from damage. Photocopying of rare and precious material should be avoided and a copy made by another process that is less damaging. In many cases it may be necessary to provide a copy that is made available to the public and to restrict use of the original. Photocopying was recognised as an important factor in the survey, as well as in the visits, in causing deterioration of documents.
32. The importance of good handling and storage really needs to be extended to ensure account is taken of the problems of security in protecting the collections. This needs to cover

the potential risks from fire, problems of water damage as well as theft, mutilation of books etc. One need is for a set of emergency procedures to raise the alarm in case of some emergency in order to summon emergency services and decide how to disperse or evacuate any books that are at risk. Such disaster preparedness is another aspect of good housekeeping practices that is frequently forgotten.

#### Preservation and conservation resources

33. One of the key issues is the availability of preservation and conservation facilities whether within the institution or through another institution in order for work to be undertaken. The survey indicated that some 60% of institutions had some form of conservation workshop but in fact the visits suggested that this was an optimistic assessment of the situation. In many institutions the conservation workshop represented no more than a room or bench at which someone could work with very little if any conservation equipment and in many cases staff who could only undertake a very limited range of simple processes. In other cases, it was clear that at an earlier date, certain items of conservation equipment had been purchased but were not being used either due to lack of trained staff or to problems of maintenance of equipment and the severe difficulties experienced in getting spare parts., The situation was if anything even worse in the case of reprographic/photographic facilities which serve as a major preservation option to provide a substitute. Although 60% of the institutions said they had such facilities, they suffered even more from problems of lack of maintenance. The position was further aggravated by major problems in the supply of materials. In effect the assessment given of the availability of conservation and reprographic facilities was not a true measure of the availability of properly organised and regularly used facilities.
34. Availability of appropriate materials is another major problem facing so many institutions. Although many institutions had microfilming facilities and could order film, many had

difficulties in obtaining supplies or processing materials with the result that the unit would be idle for months on end due to lack of chemicals. In the conservation workshops a similar problem arose in the supply of archival quality materials which are essential in repair. Archival quality materials are often difficult to obtain, due either to lack of funds or currency exchange problems and often poor quality materials have been utilised that in the long term will only cause further damage. One feature that was apparent was that in some countries local alternatives existed that would be suitable but lack of expertise in the local staff prevented them from recognising and exploiting this potential source of supply. This is one area where visits from appropriate experts could be of long term assistance.

35. The major issue of course is the availability of properly trained personnel. This was quite clearly a universal problem for without the presence of properly trained staff; preservation and conservation programmes cannot be planned nor put into practice. Many of the limitations found in the availability of facilities and materials are due to lack of trained personnel. Many of the staff who are working in conservation and microfilming units have had little or no proper training and have often only been taught one or two techniques and certainly are unable to undertake even minor maintenance of equipment to enable it to continue operating. In many countries there are no training facilities existing locally and even in those countries that do have such facilities the numbers being trained are far short of those needed. This is another area where the problem was universally recognised and inevitably requires support at an international level both to help people in obtaining training overseas and to develop and establish training facilities on a regional basis wherever possible.

Information dissemination

36.

Both the survey and the follow up visits emphasised the lack of knowledge in many places of the preservation problems that exist and the need for good practices. Such lack of information needs to be tackled by the production of guidelines, leaflets etc., as well as the provision of some sort of information service to assist in dealing with queries. Such a supporting structure is seen as part of the IFLA core programme for preservation and conservation and needs to be progressed. However the problems of libraries and archives are so similar in the field of preservation and conservation that liaison and co-operation between the two areas is desirable not only at the international level of ICA and IFLA but at national and local levels. A few countries have begun to develop national programmes with the establishment of focal points or national preservation programme offices and these are doing much to develop and promote awareness of the problems, to disseminate information and to encourage co-operation. Such activities must be encouraged in as many areas as possible.

#### SCALE AND SCOPE OF THE PROBLEM

37. The results of the questionnaire, the information provided in the mission reports and the additional information provided by a few selected countries clearly demonstrates the huge scale of the preservation and conservation problem that is faced in protecting library and archival materials which represent an important component of the worlds cultural heritage. The scale is further emphasised by the results of detailed surveys of the condition of the collections that have been carried out in a number of countries and was highlighted at the Conference on the Preservation of Library Materials held in April 1986 by the Conference of Directors of National Libraries in co-operation with Unesco and IFLA. The recently published report on "Preservation of Historical Records 1986" which was undertaken to provide guidance to the National Archives and Records Administration, Washington provides an example from the archives field.
38. Although the study suggested that funding levels in some 40% of the institutions had improved over the past 5 to 10 years, this is against a background of very low levels of activity in most institutions and the low levels of funding reflect the low priority accorded to preservation and conservation in most countries. This low priority is reflected in the lack of trained staff and the low status accorded to conservators. Whilst accepting that funding levels are generally low and in no way match the size of the problem, some institutions are beginning to look carefully at the problems in order to ensure that cost effective use is made of the resources available. Clearly there is a need for selectivity in deciding what needs to be treated and in developing preservation programmes, institutions have to take account of their collection, retention and disposal policies and to assess the relative importance of their holdings.

## ACTION PROGRAMME

### Background

39. Preservation and conservation programmes will need to be developed by all types and sizes of institutions and should take account of the need for awareness, education and training, policy development and implementation measures and the treatment options available. On the basis of the results of these studies and following a meeting of representatives of IFLA and ICA together with those experts who undertook the mission visits, a framework for an action programme to tackle the preservation and conservation issues has been drawn up and is outlined below.

### Awareness

40. The basis of any action programme should start from the necessity to increase awareness of preservation problems and the need for good practices among funding bodies, library and archival authorities, professional and non-professional staff and the general public. An awareness of the problems and an understanding of the major issues is necessary if progress is to be made. Such awareness programmes should include :-

- (a) general publicity through presentations, published articles, posters, leaflets, etc., direct to selected audiences or through the media services
- (b) production of guidelines and leaflets to provide information on a range of topics such as basic housekeeping routines, how to survey the state of the collections, etc.
- (c) production of slide/tape or video programmes
- (d) exhibitions illustrating for example preservation problems and treatment options, the results of careless handling, or the effects of poor storage conditions
- (e) the establishment of a focal point in each country as is proposed under the IFLA core programme for preservation and conservation would provide a

central resource through which a large part of any awareness programme could effectively be developed and implemented.

#### Education and training

41.

Education and training is an on-going requirement and needs to cover all aspects of preservation problems and be directed at a wide range of people. The studies not only showed the need to improve the technical knowledge of conservators but the necessity of explaining the preservation problems, the options available and the need for good practices to library and archive professionals as well as providing basic training in good housekeeping practices to non-professional staff. Provision of such training could also be directed towards users though this is more difficult to achieve. Any general education and training programme should try to include the following elements:-

- (a) courses for conservators. Full-time study over a three or four year course provides the foundation for a soundly based conservator but few such courses exist and for most would mean overseas training at considerable cost. Short courses are available in a few places either providing a general introduction to conservation principles and practices lasting perhaps 12 weeks or to cover specialist topics such as pest control and lasting perhaps 1 or 2 weeks. Such short courses though invaluable cannot replace full-time study. Another option is to provide overseas attachment for a young conservator in order to widen their experience but this needs to be based on previous training in conservation if they are to benefit from such an attachment.
- (b) courses for conservation administrators or managers are aimed at those who will be responsible for developing general programmes and running conservation

facilities. Such staff may well have a conservation background but can also be librarians or archivists who require training in preservation and conservation policies and practices sufficient that they understand the options and the issues involved but are not trained to apply the conservation techniques themselves. Few full-time courses exist but appropriate short courses could be developed.

- (c) inclusion of preservation and conservation appreciation in the training of librarians and archivists is considered essential in order to inculcate understanding of the issues and appreciate the need for good practices in all aspects of library and archive work. (Some ideas on such training are available in in the Library Association Record 88(3) March 1986 and 88(10) October 1986).
- (d) since appreciation of preservation for librarians and archivists needs to be integrated as part of their formal training, it is also desirable to provide courses on such topics for library and archive educators as most do not have the background to provide such teaching in their curricula
- (e) training of technicians can be orientated towards specific techniques and in the operation and maintenance of equipment. Where the dividing line is drawn between conservators and technicians is open to argument and indeed it is questionable how far they should be considered separately. However there is the need for lower level, less complex, work to be undertaken but if it is done by technicians it should be under the constant supervision of trained conservators and not as a replacement for conservators. In many cases, technicians do not receive adequate training in the operation and simple maintenance of specific items of equipment, e.g. microfilm cameras, bindery sewing machines, and such training would help to reduce the frequency of breakdowns. It was also recognised that

- manuals for operating equipment were rarely provided in the vernacular and so could not be understood by technicians. The provision of vernacular manuals for technicians was seen as a valuable development.
- (f) for all classes of staff it is also essential to provide, or send them on, refresher courses to enable them to keep up with new developments and changes in practices. The use of outdated practices was a frequent occurrence.
  - (g) as a basis for the above ranges of courses, it is clearly desirable to undertake a review of curricula. One such study was undertaken by Y.P. Kathpalia for Unesco in 1984 "A model curriculum for the training of specialists in document preservation and restoration : A RAMP study with guidelines" and others have been undertaken.
  - (h) short courses or seminars should be provided for non-professional staff in libraries and archives to train them in good practices when handling books as part of their day to day work.
  - (i) finally short courses or seminars could be provided for users to illustrate the problems and demonstrate good practices in using documents.

#### Policy development and implementation measures

42.

This is essential in order to place preservation in its proper context within the total operations of libraries and archives and to establish the interdependence of preservation with all other sections of the institutions. The development of coherent policies is needed if preservation programmes are to be cost effective and are to support the objectives of the institution and match in with its priorities. Such measures will need to include :-

- (a) the development of a coherent national policy for preservation and conservation in all Member States

- (b) and its application at institutional levels identification of national and institutional priorities for the collection and retention of materials and for preservation treatment. With insufficient resources it is essential to ensure that scarce conservation resources are not applied to unimportant items in the collections. The identification of national priorities must also take into account the holdings in archives and in libraries as in some areas their holdings overlap as in for example newspapers, maps, and official publications. The coverage of oral traditions is another aspect that must be included in any national policy as well as the problems of audio-visual materials. One aspect that should not be omitted is the question of the material held in private collections or by institutions outside the normal aegis of libraries and state archives. In many countries such collections represent a major part of the national heritage
- (c) consideration must be given to the choice of preservation options that are available (e.g. boxing, minor repair or refurbishing, binding, hand conservation treatment, bulk deacidification, transfer to microfilm or other media, leaving on the shelf, disposal) and their relative costs. There are significant differences in the implications of the options selected and it has to be recognised that it is neither possible to retain everything in the collections in its original format forever nor is it possible to consider everything as having equal priority. Selecting the preservation option needs to bring together the views of the conservator on the best form of treatment and the librarian or archivist on the relative value and use of the item and on the need to retain bibliographic features

- (d) the role of reprography must be identified and accepted as it provides one of the cheaper and faster options in caring for the collections as one of the objectives of preservation is to preserve the information content of the collections. The provision of substitutes by reprography or other means can serve a wide range of roles including replacement of the original, a master from which further copies can be made, as a support to loan activities, and as a way of restricting use of the original
- (e) developing preservation policies and programmes requires the close collaboration of all parties involved in the creation, retention and conservation of library and archival materials from the selection and acquisition process, the creation of records, the storage and public service aspects, exhibitions to general security
- (f) as much as possible international links, both institutional and professional, should be utilised when trying to solve preservation and conservation problems both to exchange experience, to utilise the knowledge of experts and to undertake collaborative ventures
- (g) since preservation and conservation treatment relies on the use of archival quality materials steps need to be taken to identify existing or issue new standards and to encourage the regular supply of such materials either from within the country or from outside sources

#### Treatment options

43. To ensure the preservation and conservation of the documents in our collections requires the selection of a wide range of treatment options that are aimed both at preventive measures to reduce the risk of damage or reduce the rate of deterioration and active measures to repair or replace the documents themselves. Treatment options need to take into regard the following :-

- (a) use of good housekeeping practices and the application of appropriate standards in the storage and handling of documents
- (b) minimising the effects of excessive or inappropriate use by the public
- (c) minimising the deleterious effects of the environmental factors that assist the decay of documents by trying to avoid the worst effects of high temperature and humidity levels, atmospheric pollution, dust and excessive light
- (d) use of protective measures such as boxing or protective slip cases or envelopes ensuring such items are made up of archival quality materials
- (e) use of appropriate conservation methods including furbishing, and binding or the various types of conservation treatment ensuring the methods used are appropriate to the documents, that archival quality materials are utilised, and that the best conservation principles are followed to the level appropriate to the document that is being treated.
- (f) use of reprography and other substitution methods to ensure the preservation of the information content of the documents and where appropriate in support of other conservation methods
- (g) establishment of listings or union catalogues of microform masters to reduce duplication of effort between institutions and to provide lists from which other institutions could select and order material for their collections
- (h) development of systematic policies and practices for disinfection of current acquisitions as well as existing collections and the need for careful

- assessment of their efficacy, potential health hazards and their effects on materials being subjected to the treatment
- (i) development and implementation of disaster preparedness procedures to enable the worst effects of any disasters to be avoided or minimised and to ensure that subsequent handling and treatment of any items is organised and controlled by experienced conservators
  - (j) as part of the work on treatment options, technical standards should be established and disseminated (utilising as a basis where possible standards that may exist in other countries) and guidelines produced listing "do's and don't's" to help avoid the effects of wrongly selected or wrongly applied methods
  - (k) treatment programmes will as a matter of course identify problem areas that should then form subjects for potential research projects and should further assess the relative value and priorities that ought to be accorded to these potential research projects.

## RECOMMENDATIONS

### Introduction

44. Taking into account the results of the studies summarised in this report, the identification of the main features characterising the preservation and conservation of library and archival collections throughout the world, and the action programme outlined above, a number of recommendations are made to Unesco, to ICA and IFLA, and to national institutions and associations. A number of technical recommendations have also been prepared and are aimed at those who are concerned with and responsible for preservation and conservation activities in individual institutions.

### Recommendations to Unesco

45. Acknowledging the present Unesco contribution in the field of preservation and conservation of library and archival materials,

and taking into account the scale and scope of the problems in the field of preservation and conservation as revealed by the findings of this report, IFLA and ICA consider that continuing sponsorship by Unesco, in particular in developing countries is essential if further advances are to be made in this area.

Accordingly we recommend that :-

1. the attention of Member States be drawn to the urgent need to develop coherent national policies in order to avoid the continuing destruction of this important component of our cultural heritage;
2. extrabudgetary provision be sought for the establishment and development of appropriate national and regional infrastructures for preservation and conservation;
3. since preservation and conservation policies and programmes depend on the availability of trained professional and technical staff, support should be given to the education and training programmes, particularly on a regional basis;
4. a series of international guidelines and norms be prepared and published on aspects of preservation policies and practices, including the assessment of priorities and the choice of appropriate treatments, equipment and materials;
5. a joint expert consultation on the needs and prospects for research in preservation and conservation be initiated.

Recommendations to ICA and IFLA

46. In the light of the studies the governing bodies of ICA and IFLA are requested to :-

1. continue to support Unesco action in the field of preservation and conservation of library and archival materials;

2. take account of the findings of this report, especially in the preparation of the ICA Third Medium-Term Plan, and the development of the IFLA Core Programme for Preservation and Conservation;
3. continue and extend their mutual co-operation in making more effective use of the scarce resources available, and to review the mechanisms by which this may be achieved, especially at the regional level;
4. promote awareness on the part of national member institutions and associations of the scale and scope of the problems and of the urgent need for close co-operation towards the attainment of national goals in preservation and conservation of library and archival materials.

#### Recommendations to national institutions and associations

47. In the light of this report, national institutions and associations are requested to :-
  1. Examine the report and its implications in relation to the specific situation in individual countries;
  2. establish and develop appropriate machinery for co-operation at the national level;
  3. promote an awareness of preservation and conservation needs of the cultural heritage at all levels;
  4. encourage the inclusion of preservation and conservation in national archival and library education and training programmes, at both professional and technical levels;
  5. consider the interrelationship of policies for preservation and conservation, reprography and use.

#### Technical recommendations

48. The studies clearly show that :-
  1. The life expectancy of materials used in library and archival media varies greatly. Accordingly, it is recommended that librarians and archivists co-operate with the manufacturers of such materials to improve their durability, for

example acid-free paper, binding materials, and film.

2. Damage from moulds, insects, rodents, and other pests continues to be a major concern in most regions.

Accordingly, it is recommended that a systematic policy be followed to monitor continuously the areas in which library and archival materials are stored, and to control or eradicate these causes of damage.

3. Extremes or variations of temperature and relative humidity, light, dust and industrial pollution are important contributors to the destruction of library and archival materials, and their effects on documents and staff are still seriously underestimated. Accordingly, it is recommended that librarians and archivists should seek to mitigate the effects of adverse environmental conditions by applying simple measures, e.g. the use of acid-free boxes, dust removal, sun-blinds, dehumidification, and other good housekeeping practices, and that studies should be undertaken :-

- (i) to provide guidance on the attainment of appropriate environmental standards involving the constant control of temperature and relative humidity, and the exclusion of dust, pollution and excess light
- (ii) to identify design features which would enable environmental standards to be met in libraries and archives at minimum cost.

4. The excessive and inappropriate use of library and archival materials is another contributor to their damage and deterioration.

Accordingly, it is recommended that appropriate instructions be developed for monitoring good housekeeping practices, the proper use of storage facilities, discouraging inappropriate use of photocopiers, and encouraging careful handling by users.

5. The absence of facilities, materials and trained personnel in many countries and the inadequate and uneven provision in others are major obstacles to the development of coherent programmes for the development of preservation and conservation of library and archival materials. Accordingly, it is recommended that
- (i) preservation and conservation methods should aim to meet the best modern standards
  - (ii) all library and archival institutions should have access to adequate facilities for preservation, conservation and reprography
  - (iii) where internationally tried and tested materials are not available, local alternatives should be sought, but only used after being subjected to testing for any harmful effects and for reversibility
  - (iv) personnel should be trained not only in the principles and practices of conservation and preservation, but also in the use and maintenance of available equipment.
6. At the national and international level information on preservation and conservation is not widely available, and it is therefore recommended that some mechanism be created to aid the collection, evaluation and dissemination of such information.

November 1986

To return before 31 May 1986 to

IFLA  
P.O.B. 95312  
2509 CH THE HAGUE  
Netherlands

INQUIRY UNESCO/IFLA/ICA  
on the physical conditions of the world's  
archival and library heritage

1. INSTITUTION

1.1. Name of the Institution :

Address :

City :

Country :

Telephone :

Telex :

1.2. Name and function of signer :

1.3. Volume of holdings (in linear meters) :

1.4. Average of annual accessions (in linear meters) :

---

Note : If you use additional sheets for detailed answers, please indicate in all cases the number of the question you are referring to.

## 2. SITE AND ENVIRONMENT

2.1. Does the site of your building raise preservation problems due to :

- . proximity of sea ☐
- . proximity of other humid zone ☐
- . proximity of a source of air pollution  
(e.g. industries, road traffic, etc...) ☐
- . proximity of sliding ground ☐
- . other factors (please specify) ☐
- .....
- .....

2.2. Do you observe problems due to climatic factors :

- . drought ☐
- . humidity ☐
- . variations in temperature ☐
- . variations in relative humidity ☐
- . winds (particles, pollution, etc...) ☐

2.3. Do you systematically check :

- . temperature ☐
- . relative humidity ☐
- . quality of air ☐

2.4. Do you make a systematic use of the results of these checkings :

Yes ☐ No ☐

## 3. BUILDINGS AND PROTECTION OF THE HOLDINGS

### 3.1. BUILDINGS \*

- 3.1.1. Date of construction of your building ....
- 3.1.2. Date of the latest renovation and/or extension ....
- 3.1.3. Was the building constructed for the purpose  
of its current use Yes ☐ No ☐
- 3.1.4. Are the stack areas isolated from the other parts  
of the building Yes ☐ No ☐
- 3.1.5. Material of the floor in the stack areas  
.....
- 3.1.6. Coating (if any) of the floor in the  
stack areas.....

---

\* If you have a compound of several buildings or annexes, please give the details on a separate sheet.

- 3.1.7. Is the building subject to regular technical maintenance ? Yes ☐/ No ☐/
- 3.1.8. Particular problems to report (e.g. condensation of humidity, oxydation of metallic parts, etc...)  
 .....  
 .....

### 3.2. EQUIPMENT

3.2.1. Characteristics of the shelvings used in the stackrooms (wood, rough metal, painted metal, mobile shelving, etc...)

- 3.2.2. Is the building equipyed with
- . central air-conditioning ☐/
  - . individual air-conditioning per room ☐/
  - . heating ☐/
  - . de-humidifiers ☐/
  - . humidifiers ☐/
  - . air-filtering ☐/
  - . windowless walls ☐/
  - . thermic isolation ☐/
  - . windows with filtering glass ☐/
  - . fire detection system ☐/
  - . fire extinction system ☐/

- 3.2.3. Do you
- . disinfect accessions when received ☐/
  - . disinfect periodically the stackrooms ☐/

- 3.3. Over the past five/ten years, preservation conditions in your building
- . have remanied unchanged ☐/
  - . have improved ☐/
  - . have deteriorated ☐/

- 3.4. Have you observed any damages caused by
- . natural disasters (earthquake, hurricane, flood, etc...) ☐
  - . fire ☐
  - . pollution ☐
  - . drought ☐
  - . mould ☐
  - . insects ☐
  - . rodents ☐
  - . bad quality of material (paper, etc...) ☐
  - . other causes (please specify) ☐
  - .....
  - .....

- 3.5. Have you observed deteriorations resulting from the use of documents by the public ☐

- 3.6. If so, do you ascribe the deterioration to
- . frequent use ☐
  - . inadequate supervision ☐
  - . photocopying ☐
  - . impossibility to produce microforms ☐

#### 4. POLICY AND MEANS

- 4.1. Over the past five/ten years, financial means allocated to preservation and conservation of holdings
- . remained unchanged (in respect of needs) ☐
  - . increased ☐
  - . diminished ☐

- 4.2. Are you conducting a systematic policy with a view to
- . improve preservation conditions ☐
  - . develop conservation facilities ☐
  - . repack and rebind ☐
  - . transfer on other media (microforms, etc...) ☐
  - . train and recruit qualified personnel ☐

4.3. Is there a conservation workshop operating in your institution

Yes ☐ No ☐

4.3.1. Equipment owned and processes followed  
(please specify under each heading)

. disinfection ☐

. deacidification ☐

. traditional repair ☐

. heat lamination ☐

. cold lamination ☐

. leaf casting ☐

. others ☐

4.3.2. Training and qualification of the personnel of the workshop (please indicate the main data) :

4.3.3. Is the training provided in your own country ?

. academic staff ☐

. technical staff ☐

4.3.4. If not, where are they trained ?

.....  
.....

4.4. Is there a microphotographic workshop operating in  
your institution ?

Yes ☐/ ☐/ No ☐/ ☐/

4.5. Is your institution maintaining co-operative relations  
in the conservation field with other institutions of  
your country :

. libraries

☐/ ☐/

. archives

☐/ ☐/

. museums

☐/ ☐/

. research centres of laboratories

☐/ ☐/

. others (specify if necessary)

☐/ ☐/

.....  
.....  
.....

4.6. Do you cooperate in the conservation field with any

. foreign institutions

☐/ ☐/

. international bodies

☐/ ☐/

## 5. SPECIAL DOCUMENTS

5.1. For preserving newspapers and periodicals, are you  
carrying out a systematic program

. of microfilming

☐/ ☐/

. of binding/rebinding

☐/ ☐/

. of reinforcement

☐/ ☐/

5.2. For preserving oversize documents (e.g. maps, posters,  
etc...) are you carrying out a systematic program

. of producing black-and-white microforms

☐/ ☐/

. of producing colour microforms

☐/ ☐/

. of reshelving/flattening

☐/ ☐/

. of reinforcement

☐/ ☐/

Date :

Signature :

FOLLOW-UP MISSION VISITS TO SELECTED COUNTRIES

|                |   |                 |
|----------------|---|-----------------|
| Mr Arnoult     | - | Gabon           |
|                |   | Kenya           |
|                |   | Portugal        |
|                |   | Sudan           |
|                |   | Tunisia         |
| Mr Clements    | - | Poland          |
| Mr Kathpalia   | - | India           |
|                |   | Sri Lanka       |
| Mr Roper       | - | Japan           |
| Mr Weilbrenner | - | Brazil          |
|                |   | Haiti           |
| Mr Wysocki     | - | The Netherlands |